USE OF "STOP SCALD" DOES REDUCE SCALD

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"Stop Scald" has been cleared for use on apples for scald control. This material was formerly known by the name "Santoquin" and is manufactured by the Monsanto Chemical Company and will be available from several distributors (Niagara Chemical Company and California Spray Chemical Corporation). The Food and Drug Administration has allowed a residue of 3 ppm. Although the toxicity of this chemical is very low, it is suggested that supplies be kept out of the hands of inexperienced help and that it be handled like all toxic spray materials. "Stop Scald" may result in an itch when coming in contact with sweating skin, so wash the material off your skin after using it as a spray or dip.

"Stop Scald" is 6-rthoxy-1,2.dihydro-2,2.4 trimethyl quinoline ("ethoxyquin") and is supplied as a wettable emulsion concentrate with 70 percent of active ingredient. Although white when received, it may turn brown in the sun but this does not effect its value. Since one pint per 100 gallons of water (70% emulsion) results in 900 ppm of active ingredient, 3 pints per 100 gallons result in a concentration of 2700 ppm. It is suggested that this spray be used at the concentration given on the label of the container and never more than this since clearance was given on the basis of this label. Findings here

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in Ohio and those secured in other states such as New York, Massachusetts, Rhode Island, Virginia, Pennsylvania, Washington and Michigan indicate that the material should be used at the maximum specified on the label for tree sprays and one-third less for dips or when the chemical is to be sprayed on the fruit on roller conveyors or in crates.

Results of the use of "Stop Scald" in Ohio are confined to 1959-1960 only, which was considered a very bad scald year. Satisfactory results were obtained when the material was sprayed on Stayman within two days of harvest. No other method of treatment was tried. Data from other states suggest that in a very pronounced scald year, tree sprays are not good enough. However, for those who want to spray the fruit on the trees, it is suggested that not less than 3000 ppm concentration be used and preferably on the day of picking, but never longer than two days before harvest. Fruit can be picked when still wet. The approximate cost will be from 6 to 10 cents per box or crate of fruit for materials only. Total cost of tree spraying is the highest of all methods and will vary with dosage rate and yields per acre. Considerable material is wasted with tree spraying and it is a nuisance to have to spray every one or two days but only once to a variety.

Although Ohio data do not include tests with dipping the fruit, spraying the fruit on roller-conveyors or spraying full crates, the experience of others is reliable. Best results are always obtained when the fruits are treated as soon as possible after harvest although they may be treated as late

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as one week or even 20 to 30 days after harvest with success if scald potential is not large. Since good coverage of the fruit is important for control, the dipping method is the best. Dipping need be only momentary and no drying of fruits before storage is necessary. Change the solution once or twice daily. Some dump the fruits into the emulsion and elevate them out of the tank with rollers, a section of which should be used as a drainage area. Materials cost about 1 to 2 cents per box.

The second best method is spraying the fruit on rollers which may be a section of roller sorter. The spray must cover all sides of the fruits as they turn. Whether this sprayed emulsion can be re-used is not known at present. Spray with just enough volume and pressure to wet the apples. Materials cost about 2 to 3 cents per crate.

Spraying full crates or bulk bins has not been tried with "Stop Scald". This method should be successful with field run fruit when the crate and fruit are sprayed with one quart of water emulsion per crate. A small sprayer developing 100 pounds pressure should be satisfactory. Spray for 5 seconds if the sprayer delivers one quart of spray in 5 seconds. At high dosage rates of 2000 to 3000 ppm be careful that no free liquid stands at the bottom of the crate as this may injure the fruit through skin blackening. Materials cost 2 to 3 cents per crate.

Diphenylamine or DPA is considered the best scald control chemical but will not be available for scald control until 1961.

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There is no point in using scald controlling chemicals on apples that will be sold by December first. It is still urgent to pick at the right time, store promptly, cool the fruit fast, and watch closely for scald development. It pays to remove a few fruits from storage every week or two and warm them up for evaluating scald control.

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